Draft press release on HABs in Texas *provided by Dave Buzan TPWD*

The tenth international conference on Harmful Algal Blooms in St. Petersburg, Florida, highlighted much of the work being done in Texas by universities and the state to better manage our response to harmful algal blooms. Algae are microscopic plants living in water and "blooms" of algae are periods when there are unusually high numbers of those algae in the water. Harmful algal blooms are algal blooms that produce poisons and harm aquatic animals and which may also harm humans, wildlife or livestock.

Harmful algal blooms have been known to occur for hundreds of years. Spanish explorers reported incidents in the Gulf of Mexico when massive fish kills occurred which were probably red tides. Texas experiences three types of harmful algal blooms.

Red tides in the Gulf of Mexico are caused by a toxic algae called *Karenia brevis*. Red tide can kill large numbers of fish and cause respiratory irritation for beach goers. Blooms are reddish-brown in color and can actually make large areas of bays or the Gulf appear red. Red tide is important because the toxin can be concentrated in oysters making them unsafe to eat. Texas has had six major red tides since 1960. Red tides hurt the economy of coastal communities. During the 2000 red tide, the economic impact to the Galveston area was about $18 million. The Texas Department of Health closely tracks toxin contamination of oysters to ensure consumers do not get sick from consuming contaminated shellfish. No one knows what causes red tides.

Golden algae blooms occur periodically in slightly salty waters of rivers and reservoirs in west Texas. Portions of the Pecos River, Colorado River system, Brazos River system and Red River system have experienced golden algal blooms since the 1960's. Golden algae, also called *Prymnesium parvum*, release a toxin that kills fish and other animals that breathe through gills like tadpoles. Golden algae do not pose a direct health threat to humans. Golden algal blooms turn the water a dark tea color. Although no one knows what causes golden algae to bloom, we know that conditions that make water salty like drought, brine contamination from oil and gas production, intensive water use and some irrigation practices might contribute to the conditions necessary for blooms.

Blue-green algae, closely related to bacteria, typically form blooms in ponds during late summer. Blue-green algae thrive in nutrient-rich waters and can create a scum layer on the water's surface that looks like someone dumped blue-green paint on the water. Blue-green algae may cause fish kills but also have caused kills of domesticated animals like cattle and dogs that drink the bloom water. High concentrations of blue-green algae cause taste and odor problems in some reservoirs used as drinking water supplies.

University researchers at the University of Texas Marine Science Institute and at Texas A & M University are conducting research on red tide and golden algae to better understand why they occur in Texas and what might be done to control their impacts. These researchers are working with the Texas Parks and Wildlife and the Texas Department of Health to develop tools to monitor blooms, to conduct basic research on these algae, and to improve communication about harmful algal blooms. An interagency workgroup has been established to coordinate communication and cooperative work. Members of the workgroup represent Texas on the Harmful Algal Bloom Observing System pilot study which is designed to help compile data and provide detailed information about where red tides might occur and the conditions that might help them bloom.